

Meat Craze of The People of North East Regions

Dr. Priya Muktan

PhD Scholar, College of Veterinary and Animal Sciences, Mannuthy, Kerala Veterinary and Animal Science University

The North Eastern Region of India boasts a rich and intricate cultural tapestry, adorned by the presence of 145 tribal communities and over 220 distinct ethnic groups. These diverse groups collectively speak around 220 languages and an equal number of dialects. Within this cultural mosaic, culinary practices exhibit significant variations.

Notably, approximately 95% of the indigenous people in the North Eastern Region are meat enthusiasts. This preference for meat over milk might be attributed to the high prevalence of anemia among the ethnic population. Anemia, characterized by a shortage of iron in the body, particularly affects the Mongoloid population, who have deep-rooted origins in this region. Mongoloids are prone to having low ferritin content, a condition stemming from progressive iron deficiency. This deficiency results in a reduced delivery of iron to critical functional sites, leading to a depletion in iron-dependent functions, such as erythropoiesis (the production of red blood cells).

In the human body, iron exists primarily in complex forms bound to proteins, including hemoproteins like hemoglobin and myoglobin, heme enzymes, and nonheme compounds like flavin-iron enzymes, transferring, and ferritin. Iron plays a crucial role in the synthesis of oxygen transport proteins, particularly hemoglobin and myoglobin. Additionally, it contributes to the formation of heme enzymes and other iron-containing enzymes involved in electron transfer and oxidation-reduction reactions.

Roughly two-thirds of the body's iron is found in the form of hemoglobin in circulating red blood cells, while 25% is stored as readily

mobilizable iron reserves. The remaining 15% is bound to myoglobin in muscle tissue and various enzymes essential for oxidative metabolism and various cellular functions.

Importantly, the consumption of meat enhances the absorption of iron from both organic and inorganic sources by up to 33%, in contrast to the lower absorption rate of 8-11% observed in vegans. This dietary choice, therefore, proves advantageous in ensuring adequate iron intake and addressing the iron deficiency issues prevalent among the diverse communities of the North Eastern Region.

According to the National Academy of Sciences of the United States (2001), vegetarians have 1.8 times higher requirement for iron compared to nonvegetarians. Iron status among vegetarians is likely a result of consumption of non-heme iron which has lower bioavailability in comparison to heme iron. The main underlying reason is the presence of phytate which is the principal iron absorption inhibitor found in grains, especially whole grains, legumes, and nuts. Oxalates found in some green leafy vegetables are also the potent inhibitor of iron absorption in addition to the polyphenols, particularly the tannins found in many cereals, vegetables and some beverages like tea, coffee etc. Accordingly, the WHO has suggested limiting drinking of these beverages 1 to 2 hours after a meal.

Problems like malnutrition, hidden hunger etc. are mainly faced by the lower-income society. Many studies have shown that anaemia is more prevalent in the socio-economically disadvantaged population. In developing countries, the risk of

anaemia amongst the low-income groups is a major concern for the health authorities. Prevalence of anaemia is directly linked to Human Development Index; countries low HDI may require a comprehensive long-drawn plan of action to mitigate the ill effects of anaemia. Raising the level of a mother's education has a positive impact on anaemia management. The economically underprivileged populations of the NER eat the meat of unconventional animals like dogs, cats, rodents and reptiles too. The mongoloid Buddhists of Arunachal Pradesh and Bhutan also eat meat by following the principles of *Tsethar* and *Makhep* – that is slaughtering the animal elsewhere and not disclosing the identity of the butcher.

Absorption of iron can be enhanced when a significant source of vitamin C and/or other organic acids is added to a meal – and hence the fondness of the people of Assam and other parts of the NER for the sour fish curry (*Masor Tenga*). Food preparation techniques like fermentation and germination reduce the phytic acid content of the grains which leads to enhanced bioavailability of non-heme iron. That's why northeast people have adapted and perfected the techniques of fermentation. Fermented food like *Akhuni* (fermented soybean), *Khoricha* (fermented bamboo shoot), *Ngari* or *Shidal* (fermented fish) are some of the items relished by the people of the NER. Due to the consumption of meat from unconventional animals and birds and the consumption of these fermented foods items which indeed have a very obnoxious smell in their pre-cooked state, the people of mainland India even look down upon the people of the NER. For their culinary habits, the people of the NER also suffer from racial discrimination in their own country! Sometimes it becomes difficult for them to get rented accommodation in cities like Delhi and Mumbai because of their stinky foods which has been shown up in the Nicholas Kharkongor-directed Bollywood movie 'Axone: A Recipe for Disaster (2020).

The people of the NER prefer meat over milk. Milk no doubt is a complete food good and a very good source of vitamins B₂, B₁₂, and D; calcium, potassium, and phosphorus, and traces of zinc, magnesium, vitamins B₆, B₁, and A, but it is devoid of natural iron. The people of the NER suffer from the inability to digest milk sugar 'lactose' which is associated with the biological adaptation gene mutation, called 13910T which originated in

Europe some 7500 years ago. Amongst the people of western and northern India who can digest milk into adulthood, the gene frequency is over 40%, whereas amongst the northeasterners it is less than 1%. In India, lactose intolerance ranges between 60 and 65%.

The ill effects of severe iron deficiency amongst the aboriginals of the NER have been reported to result in a high rate of infant mortality, malnutrition, dwarf growth limiting their employment in the country's defence services, and lower IQ levels. The Ministry of Food Processing Industries, Govt. of India has estimated the loss arising out of the anaemia of the people of the NER to the GDP of the country at over Rs. 500 crores annually (2005). The culinary practices of the people of the NER have ingrained meat consumption, consumption of fermented foodstuffs, banana stems and flower etc. by following their ancestral teachings to mitigate the iron deficiency syndromes. The people of the region are aware of the nutritional significance of iron in their diets since the time of yore and probably therefore foods are generally cooked in iron vessels so that traces of the iron leaching out to the food could contribute to iron supplementation.

The policies of the Government of India to fortify staple foods such as wheat and other cereal products with iron would have an improved effect if regular provision of meat is ensured in the mid-day meal scheme for the kids of the NER. The planner and executors of the country may delve into strategies to grow more food animals and birds in the region to harvest the twin benefits of ensuring nutrition and managing the ill effects of iron deficiency which will contribute to the overall health and performance of the people of the NER to aid in the HDI status of the nation. The people of mainland India may appreciate that the people of the NER eat meat even from unconventional sources, the 'foul smelling' fermented cereals, fish, and bamboo shoots etc. as an instinct for their racial survival only and therefore respect their food habits.

References

- May Malar Win (2018). Indian Eating Habits, Foods and Custom, Spice Garden restaurant. (<https://www.spicegardenrestaurant.com/indian-eating-habits-foods-and-custom>)
- Foods Habits In Different Parts Of India (2022), E Times Entertainment Times.
- Diversity of India, (2021) PJ ACAD; Reader's Blog (<https://timesofindia.indiatimes.com/readersblog/pracin-jain-academy/diversity-of-india-28741/>)



PENNY VAN ESTERIK (2008), Food Culture in Southeast Asia, ISBN: 978-0-313-34419-0 ISSN: 1545-2638, Food Culture around the World Ken Albala, Series Editor. GREENWOOD PRESS. (<https://catalogue.nla.gov.au/catalog/4503620>)

Martin W. Lewis, 2016 India: Milk in the Northwest; Meat in the Northeast. Geo currents (<http://www.geocurrents.info/blog/2016/02/08/the-indian-diet-milk-in-the-northeast-meat-in-the-northeast/>).

NIKHIL RAMPAL(2022), Vegetarianism rules in north India, but dal and paneer as proteins punch below their weight, THE PRINT (<https://theprint.in/india/vegetarianism-rules-in-north-india-but-dal-and-paneer-as-proteins-punch-below-their-weight/916827/>).

Cedars-Sinai Staff (2019). Are Animal Proteins Better for You Than Plant Proteins? .Cedars-Sinai Blog.(<https://www.cedars-sinai.org/blog/best-protein.html>).

Hertzler SR, Lieblein-Boff JC, Weiler M, Allgeier C. Plant Proteins: Assessing Their Nutritional Quality and Effects on Health and Physical Function. Nutrients. 2020 Nov 30;12(12):3704. doi: 10.3390/nu12123704. PMID: 33266120; PMCID: PMC7760812. (<https://pubmed.ncbi.nlm.nih.gov/33266120/>).

NIKHIL RAMPAL(15 April, 2022). Vegetarianism rules in north India, but dal and paneer as proteins punch below their weight. The Print. (<https://theprint.in/india/vegetarianism-rules-in-north-india-but-dal-and-paneer-as-proteins-punch-below-their-weight/916827/>).

SAGA OF INDIAN FOOD A Historical and Cultural Survey. Indira Chakravarty (1972). Sterling Publishers(P) LTD.

International Institute for Population Sciences (IIPS) and ICF. 2017. National Family Health Survey (NFHS-4), 2015-16: India. Mumbai: IIPS. (<https://dhsprogram.com/pubs/pdf/fr339/fr339.pdf>)

